

EXHIBIT 5

Part 3

The snipers:

- Prevent enemy infiltration.
- Detect and destroy infiltrators.
- Protect the FEBA from surprise attack.
- Protect friendly patrols from ambush.
- Screen the flanks and rear of the defensive position.

Snipers can also operate as an extension of *contact patrols* (to help establish contact with an enemy force whose definite location is not known) or *search and attack patrols* (with a combined mission of reconnaissance and combat). Snipers can actually operate "as part of" an *ambush patrol* or *reconnaissance patrol*.

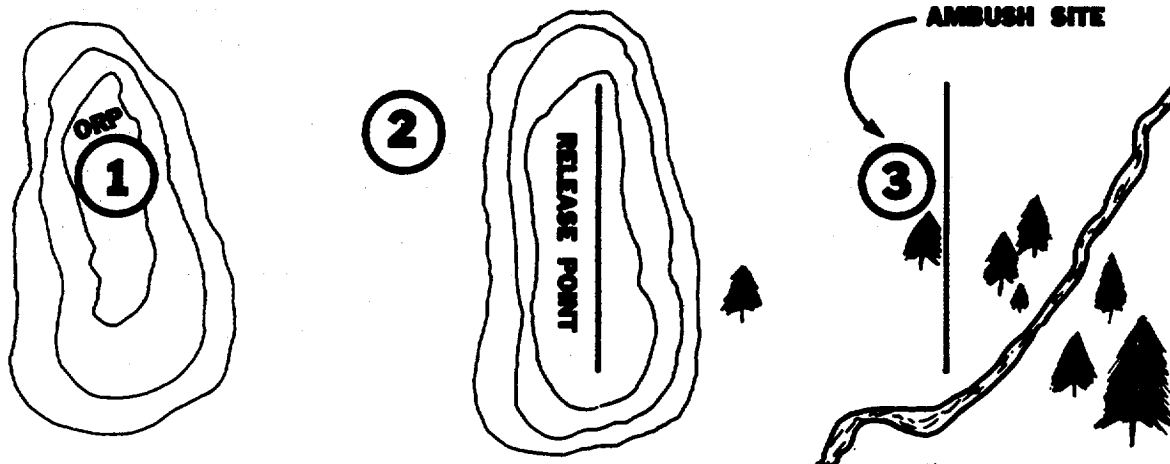


Figure 6-21. Ambush.

As part of an ambush patrol, the sniper can be used to secure the objective rallying point, or move into a position between the objective rallying point and the release point to cover the withdrawal by delaying and harassing enemy pursuit, or they can be used at the ambush site only if there is a need to reduce a specific target.

AMBUSH PATROL

As part of a reconnaissance patrol the snipers are used either as part of the security team or the reconnaissance team. They can also be used to provide objective rallying point security or rendezvous point security.

RECONNAISSANCE PATROL

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COMBAT OUTPOST

Snipers are employed as a series of outguards, as a counter-reconnaissance screen to provide early warning of enemy approach, and to gather detailed information on the enemy. The snipers deny the enemy close observation of the battle area. They delay and confuse the enemy in hopes of making him deploy his forces prematurely. The snipers deceive the enemy as to the true location of the battle area. The snipers can also be used to cover the rear when the outguards withdraw to the FEBA. The sniper's observation skills and fire support control are definite assets to be utilized when establishing a combat outpost. He can do much to keep the enemy off balance by making only a few kills in one location and keeping constantly on the move to the next position.

PATROL BASES

When there is a need for more distant sniping operations, the sniper teams establish a platoon patrol base in conjunction with an infantry unit (platoon). The sniper teams operate from the platoon patrol base, and the normal infantry patrolling activities from the platoon patrol base provide the necessary backup for the snipers and help in construction of the hides. The snipers establish their positions within normal patrolling range of the platoon patrol base.

RAIDS

Snipers are used with the security forces to isolate the objective, cover avenues of approach into the objective, cover the routes of friendly withdrawal, prevent enemy reinforcement, and assist in the observation of the objective and surrounding areas. The snipers can be used with the support element if a specific enemy target is to be eliminated.

DEEP INSERTIONS

The teams can be inserted, at night, by low level treetop-high insertion by helicopter. The snipers can rappel if need be. The helicopters should fool the enemy as to the true location of the insertion by conducting "touch and goes" or by hovering over multiple locations prior to and after the actual insertion. The sniper teams would be supplied with "spie rigs" for rapid immediate extraction by helicopter if necessary. Immediate extraction would be covered by fire support or helicopter-gunship support controlled by the sniper. Normal extraction would be accomplished by helicopter.

If operating from a hide, constructed and camouflaged properly, the snipers would be able to stay in the hide until the enemy force moved through them. Immediate extraction would not always be necessary. As there is no immediate friendly backup available, a deep insertion of snipers should only be undertaken if a specific enemy target is to be eliminated.

When employed behind enemy lines, the sniper harasses and demoralizes the enemy, causing him to redeploy some of his frontline troops to protect important supply depots, commanders, and installations in rear areas. This will effect the enemy's feeling of "security" even in their own territory.

SUMMARY

A smart commander makes maximum use of all his assets in a fight. All infantry commanders must be strongly versed in the employment of snipers and employ them effectively and correctly in all forms of tactical training. The classical sniper definitely has an application on the modern battlefield, and if utilized correctly will greatly contribute to our quest of winning the first battle of the next war.



IN MOST CASES, THE MEANS OF SNIPER EMPLOYMENT SHOULD NOT BE PLANNED ON A LEVEL LOWER THAN THE COMPANY COMMANDER'S LEVEL, AND SNIPER TEAMS SHOULD NOT BE ATTACHED OUT LOWER THAN THE COMPANY LEVEL.



SECTION 7

PLANNING AND PREPARATION OF A SNIPER MISSION

701. INTRODUCTION

All aspects of planning and preparation of a sniper mission are contained in this section, from the sniper employment officer's responsibilities to the sniper team's responsibilities in planning, preparing, and executing a mission. A sniper patrol is always "tailored" for the mission it is to execute.

A sniper mission (patrol) is a detachment of one or more sniper teams performing an assigned mission of engaging selected targets and targets of opportunity, and collecting and reporting information, or a combination of these, which contribute to the accomplishment of the supported infantry's mission.

DEFINITION

702. SNIPER EMPLOYMENT OFFICER

The responsibilities of the sniper employment officer/staff noncommissioned officer (SNCO) in the planning and preparation of a sniper mission are:

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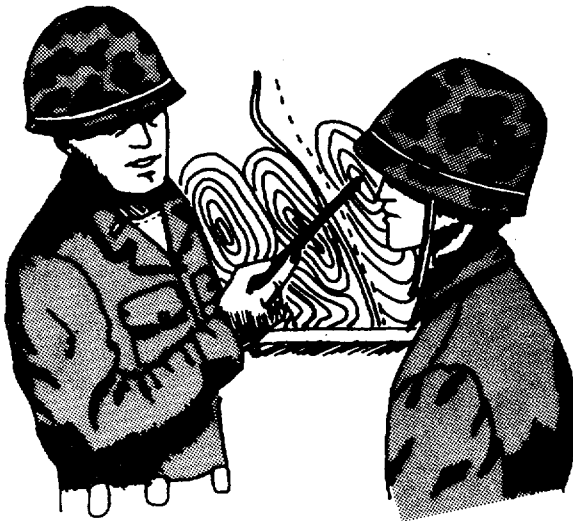


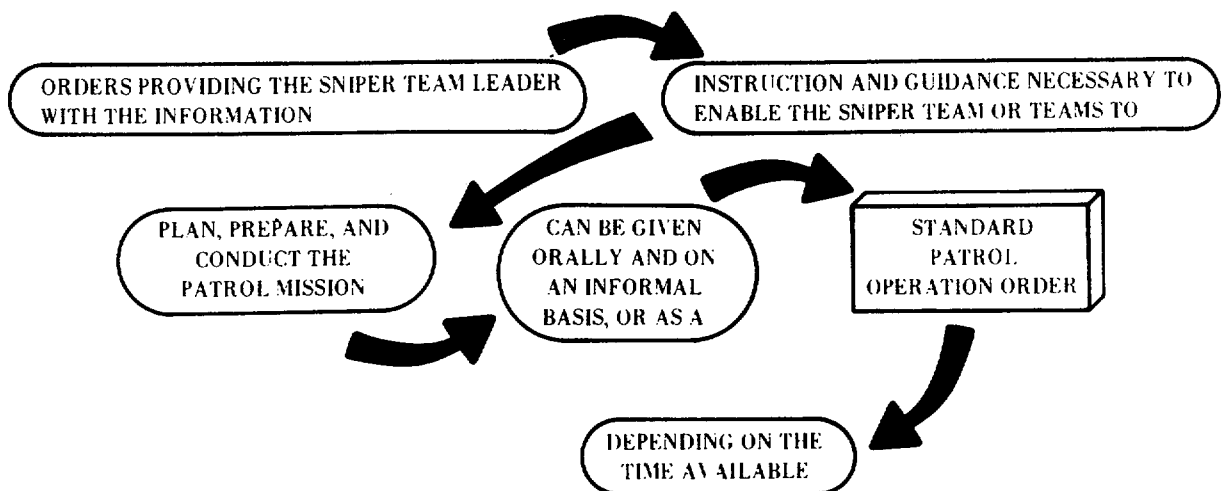
Figure 7-1. Sniper Employment Officer.

- Issuance of necessary orders to the sniper team leader.
- Coordination.
- Assignment of patrol missions and type of employment.
- Supervision.
- Briefing team leaders.
- Debriefing team leaders.
- * Advising the supported unit commander on the best means to employ and utilize his sniper teams.
- * The most important responsibility.

The sniper employment officer/SNCO is directly responsible to the battalion commander for the operational efficiency of his sniper teams. He must also work hand-in-hand with the S-2 and S-3 officers.

ISSUANCE OF NECESSARY ORDERS TO THE SNIPER TEAM LEADERS

If the sniper employment officer/SNCO is not available, such as when sniper teams are attached out to the company level, the sniper team leader assumes the sniper employment officer's/SNCO's responsibilities.



The responsibility for all detailed planning, when practical, should be given to the sniper team leader. The mission should be described in only the most general terms by the sniper employment officer or the supported infantry commander. The routes, targets, location of firing positions, detailed mission planning, fire support planning, and coordination should be the responsibility of the sniper team leader. When he has time, he should prepare and issue, to the observer, a detailed patrol order to ensure that he has planned for every contingency.

COORDINATION

Coordination is a continuing, joint effort by the sniper employment officer/SNCO and the sniper teams. The three general areas of coordination are between the:

- Staff and staff of other units.
- Staff and the sniper team leaders.
- Sniper team leaders and units immediately affected by the patrol's operation.



Figure 7-2. Sniper Briefing Infantry Commander.

Recommendations for sniper missions to be conducted and the sniper teams to be provided are submitted to the commander for his approval.

The commander may, in his briefing to his staff, inform the sniper employment officer or sniper team leader that snipers may be needed in the overall "big picture."

A sniper patrol is assigned only ONE major mission. The essential tasks required to accomplish the mission are assigned to both the sniper teams and elements of the supporting units (backup units).

Whether the sniper mission be a specific mission or a general mission, it must be clearly stated, thoroughly understood, and within the CAPABILITIES of the sniper team.

ASSIGNMENTS OF PATROL MISSIONS AND TYPE OF EMPLOYMENT

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Figure 7-3. Staff Noncommissioned Officer Supervising Sniper Team.

BRIEFING TEAM LEADERS

Once the commander has stated the need for snipers, the sniper employment officer, if available, must brief the sniper team(s) on the assigned mission.



Figure 7-4. Sniper Team Briefing.

DEBRIEFING SNIPER TEAM LEADER

On return, sniper teams are debriefed by the sniper employment officer/SNCO and by the S-2 and S-3 representatives, or the supported infantry commanders. The patrol report form is used to help ensure complete debriefing.

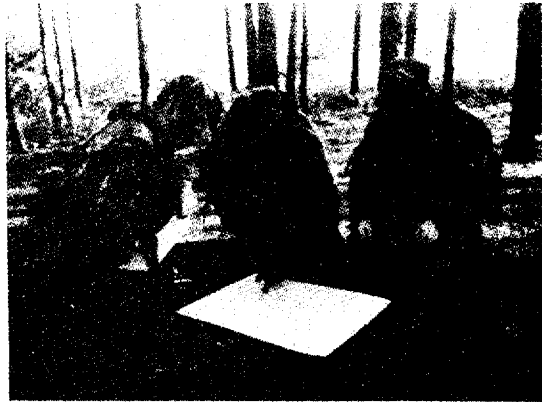


Figure 7-5. Debriefing.

PATROL REPORT

(DESIGNATION OF PATROL)

TO:

MAPS:

- A. SIZE AND COMPOSITION OF PATROL
- B. TASK (MISSION)
- C. TIME OF DEPARTURE
- D. TIME OF RETURN
- E. ROUTES (OUT AND BACK)
- F. TERRAIN (COMPLETE DESCRIPTION)
- G. ENEMY

STRENGTH, DISPOSITION, CONDITION OF DEFENSE, EQUIPMENT, WEAPONS ATTITUDE, MORALE, EXACT LOCATION, MOVEMENTS, AND ANY SHIFTS IN DISPOSITION, TIME ACTIVITY WAS OBSERVED, COORDINATES WHERE ACTIVITY OCCURRED

- H. MAP CORRECTIONS
- J. MISCELLANEOUS INFORMATION
- K. RESULTS OF ENEMY ENCOUNTERS (KILLS)
- L. CONDITION OF PATROL, INCLUDING DISPOSITION OF ANY DEAD OR WOUNDED
- M. CONCLUSIONS AND RECOMMENDATIONS

SIGNATURE/GRADE/RANK/ORGANIZATION/UNIT

(FILLED OUT UPON COMPLETION OF EVERY MISSION)

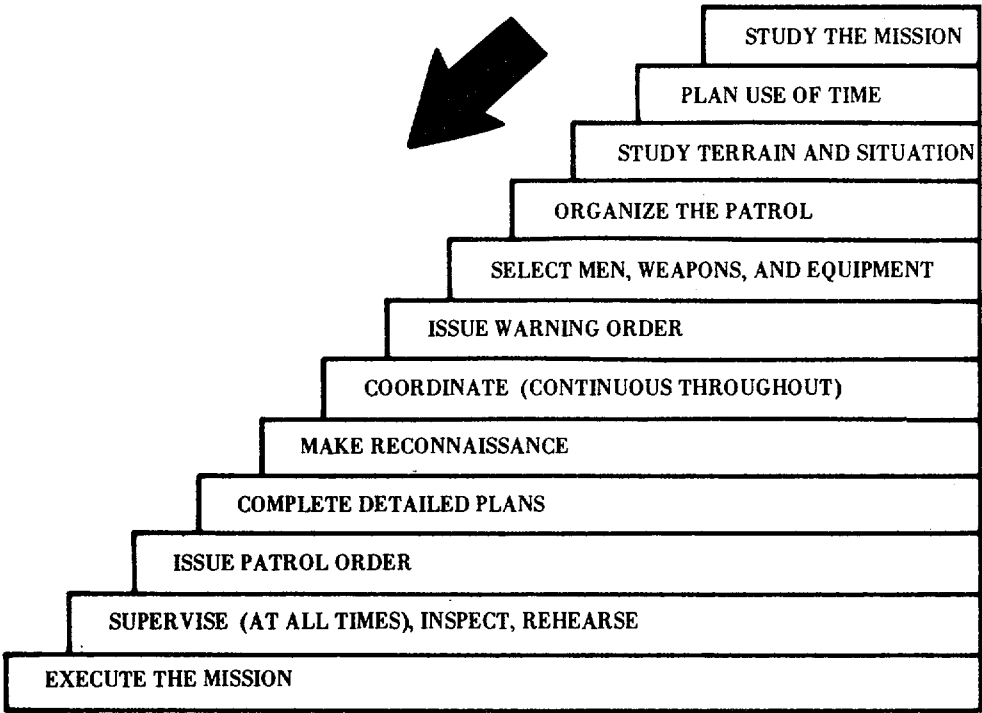
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RECEIVING THE ORDER

During the issuance of the order (briefing by the sniper employment officer/SNCO, battalion commander, or supported company commander), the sniper team leader listens carefully to ensure that he clearly understands all information, instructions, and guidance. He takes notes (or uses a checklist) for later use in planning. After the briefing, he asks questions if points are not understood or not covered.

If supporting an infantry commander, it is the sniper team leader's responsibility to advise the commander of the proper and optional means of sniper employment to best accomplish the mission.

703. PATROL STEPS



ESTIMATE OF THE SITUATION

In the preparation of his detailed order, the estimate of the situation is reflexive and continuous by the team leader, upon receipt of his order.

- M ission
- E nemy
- T errain and weather
- T roops and fire support available

STUDY THE MISSION

The sniper team leader carefully studies the mission. Through this, and the study of the terrain and situation, he identifies the essential tasks to be accomplished in executing the mission.

Example. Mission: Need sniper security for day ambush, site grid 87659387.

The blocking of routes of escape from the kill zone is an essential task which must be accomplished to execute the mission.



Figure 7-6. Situational Studies.

PLAN USE OF TIME

Combat situations seldom allow the sniper team leader as much time for planning and preparation as he would like. A well-planned sniper patrol should be planned 24 to 48 hours prior to the time of departure. The sniper team leader should plan his time schedule around specific times (i.e., time of departure, time of attack, etc.) in the operation order.

STUDY AND ANALYZE THE TERRAIN AND SITUATION

Terrain. The sniper team leader and his team study the terrain over which they will be moving, the friendly and enemy situations, and areas of operation.

The sniper team makes a detailed study of maps and aerial photographs (if available) and, if time allows, makes a sand-table or terrain model of the terrain over which they must pass, to aid in position and route selection. It must include the objective area.

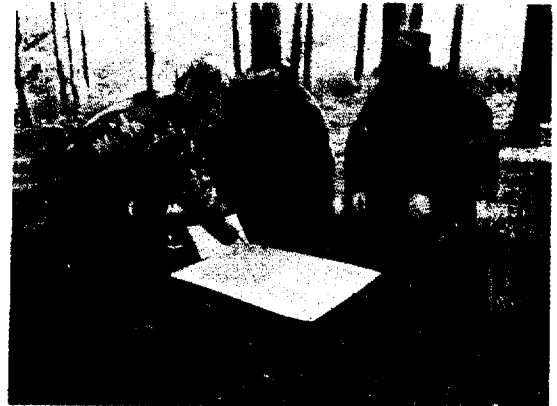


Figure 7-7. Studying Maps and Aerial Photographs.

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Situation. The sniper team leader studies the strengths, locations, dispositions, and capabilities of the friendly forces and their fire support that may affect the mission's operation.

The sniper team leader should put himself in the mind of the enemy and come up with an educated guess as to where the enemy is likely to be and what he is likely to do before and after the long-range, precision sniper shot. He should ask himself questions about the enemy:

- What has the enemy done in the past?
- What is he likely to do NOW?
- How will the enemy be moving (security activities; patrols, platoons, or companies; etc.)?
- What will the enemy be trying to accomplish?
- What avenues of approach will be utilized?
- How will terrain and weather affect his movement?
- When will the enemy move?
- What is his plan/tactics?
- How can the sniper's rifle and fire support plan combat likely and known enemy activities and contribute to the accomplishment of the friendly infantry mission?

The sniper team leader makes his tentative plan of action. The plan may include:

- Type of position.
- Location of position.
- Type employment.
- Security backup needs (fire team, squad, etc.).
- Target location.
- Passwords of frontline infantry units.
- Time of departure and return.
- Equipment needed.
- Route selection.
- Communications.
- Call signs and frequencies needed.
- Fire support available.

MAKE A TENTATIVE PLAN

A tentative plan is later developed into a detailed plan of action.

ORGANIZE THE PATROL AND INFANTRY BACKUP TEAM AND SELECT WEAPONS AND EQUIPMENT

If the sniper team is to be inserted as an extension of patrolling activities (by a security patrol), the security patrol leader maintains operational and logistic control over the sniper team until the sniper team is dropped off, and then resumes control when the snipers are picked up on the return of the patrol. (The sniper team leader coordinates with the patrol

leader/backup team on the special equipment necessary for the infantry members of the patrol, such as axes, picks, sandbags, ponchos, precut logs, etc., for hide construction, as it may be necessary for the infantry members to help in the preparation of a hide.) If the snipers should require immediate aid and extraction, the patrol leader/infantry backup team commander and the sniper team leader also coordinate the concept and plan of backup, the normal pickup procedures, and the times, if applicable. Both the sniper team leader and the patrol leader/backup team commander must be thoroughly familiar with each other's missions, routes, and fire support plans. The patrol/backup leader must be able to terminate his patrol mission at any time in order to help extract the sniper team, if necessary. The two leaders must coordinate time schedules as well (i.e., time of rehearsals, time to issue patrol order, time of departure, etc.).

It is the responsibility of the sniper team leader to coordinate with all friendly units. Examples of coordination which must be made are:

- Movement in friendly areas. Commanders must be informed of where and when the sniper team will be operating in their sector. Sniper teams must also have information on other friendly activities (patrols) in the area of operations.
- Departure and reentry of friendly areas (passwords). Detailed coordination is required here.
- Fire support plan and other friendly fires planned in the sniper's area of operations.
- Movement of other sniper teams.

A reconnaissance may be limited to just a detailed map and/or aerial photograph, or from the point of departure to the limit of sight. Briefings by units who have previously operated in the area will also be of help.

The sniper team leader ensures that nothing is left out from the predeparture of friendly lines to reentry of friendly lines.

The way an order is issued is the way it will be received and understood. The order is issued confidently and in a loud and clear voice, continually referring to a detailed sandtable or rough terrain sketch.

COORDINATE

MAKE A RECONNAISSANCE

COMPLETE DETAILED PLAN

ISSUE PATROL ORDER

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SUPERVISE

The sniper leader inspects his team and rehearses them.

REHEARSE

Visual aids, such as terrain models, blackboards, and sandtables, are used to help ensure COMPLETE understanding by all personnel. If visual aids are not available, planned actions are sketched out on paper, sand, dirt, or snow.



An effective method for rehearsal is for the sniper team leader, team members, sniper employment officer/SNCO, or supported infantry commanders concerned with the mission to talk the entire patrol through each phase of the mission, describing the actions to take place from the time of departure to return. Terrain models should be used in this method of rehearsal.

Figure 7-8. Rehearsal.

The key to effective execution is detailed planning to cover every contingency during the previous patrol steps. "What can go wrong, will go wrong." The only defense is detailed planning and never letting his guard down. The sniper is always thinking, putting himself in the mind of the enemy, asking himself what would he do if he were in the enemy's shoes.

EXECUTE THE MISSION

704. WARNING ORDER

The time needed to prepare for a mission depends on such factors as the nature of the mission, the proficiency of the sniper teams, the time allowed for reconnaissance, etc. The sniper team leader provides maximum preparation time possible by issuing a warning order. If an infantry backup force is to be utilized, the sniper team leader will coordinate and issue his warning order in conjunction with the patrol/backup leader.

The patrol warning order consists of the following:

PATROL WARNING ORDER

- A. A brief statement of the situation.
- B. Mission of the patrol.
- C. General Instructions:
 - 1. General and special organization of patrol (if operating with an infantry patrol/backup force).
 - 2. Uniform and equipment common for all.
 - 3. Weapons, ammunition, and equipment.
 - 4. Chain of command.
 - 5. A time schedule for the patrol's guidance.
 - 6. Time, place, uniform, and equipment for receiving the patrol leader's order.
 - 7. Times and places for inspections and rehearsals.
- D. Specific Instructions:
 - 1. To subordinate leaders.
 - 2. To special purpose teams or key individuals (backup team if applicable).

DISCUSSION OF WARNING ORDER

Situation. Minimum details are given to include only the information the team needs to prepare for the mission. The complete situation is given in the team leader's patrol order.

Mission. This is a brief but clear statement of what the sniper teams are to accomplish and the location or area in which it is to be accomplished.

General Instructions:

Weapons, Ammunition, and Equipment. This paragraph should include the special equipment to be carried by the infantry (if applicable) for the preparation of hides.

Chain of Command. The two-man sniper team is the basic operational organization for the employment of a sniper patrol. The sniper team leader is in charge of his team. The security teams (if needed) will have a chain of command set up by the NCO of the security team or the patrol leader, depending on the situation.

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Time, Place, Uniform, and Equipment for Receiving Patrol Leader's Order. If operating with a backup force (patrol) as an extension of patrolling activities, the snipers will also attend the patrol order briefing of the infantry unit conducting the patrol.

Times and Places for Inspections and Rehearsals. Snipers will rehearse with the infantry patrol/backup force if operating as an extension of patrolling activities from the forward edge of the battle area (FEBA).

Specific Instructions. Specific instructions are given to:

Security teams (as pertains to hide preparation and extraction).

705. PATROL ORDER

The patrol order is issued in a standard five-paragraph operation order sequence as shown below. A detailed orientation should be given first from a sandtable.

SITUATION

(AS IT AFFECTS THE PATROL)

- A. Enemy Forces. Weather, terrain, identification, location, activity, and strength.
- B. Friendly Forces. Mission of next higher unit, location and planned actions of units on right and left, fire support available for patrol and mission and routes of other patrols.
- C. Attachments and Detachments.

MISSION

What the patrol is to accomplish and the location or area in which it is going to be done.

EXECUTION

- A. Concept of Operation. The overall plan and mission of elements, teams, and key individuals in the objective area (to include hide construction).
- B. Other missions, not in the objective area, of elements, teams, and individuals; included are such tasks as navigation, security during movement, and security during halts.

- C. Coordinating Instructions:
 1. Times of departure and return.
 2. Primary and alternate routes.
 3. Departure and reentry of friendly lines.
 4. Organization for movement.
 5. Actions at danger areas.
 6. Actions on enemy contact.
 7. Rallying points and actions at rallying points.
 8. Actions at objective areas.
 9. Debriefing.
 10. Other actions.
 11. Rehearsals and inspections.

ADMINISTRATION AND LOGISTICS

(The "what" was covered in the warning order, now here in the patrol order, the "how" and "when" are covered.)

- A. Rations (when to eat).
- B. Arms and ammunitions (how to carry).
- C. Uniforms and equipment (how to rig).
- D. Method of handling wounded and prisoners.

COMMAND AND SIGNAL

- A. Command
 1. Chain of command.
- B. Signal
 1. Signals to be used within the patrol.
 2. Communications with higher headquarters, radio call signs, primary and alternate frequencies, times to report, and special code to be used.
 3. Challenge and passwords (to reenter friendly lines).

706. ARM-AND-HAND SIGNALS

Employment of sniper teams in support of infantry units requires the sniper to be thoroughly familiar with arm-and-hand signals used by the infantry. The team's members must thoroughly understand the methods of silent communications that will be utilized during the mission. ANY SIGNAL THAT IS UNDERSTOOD IS CORRECT. Any properly given arm-and-hand signal is considered an order or command to be obeyed INSTANTLY. All standard arm-and-hand signals are listed in FMFM 6-5, *Marine Rifle Squad*.

707. BASIC FIRE SUPPORT PLANNING AND CONTROL

Only the basics of fire support planning and control are covered in this paragraph. Further details can be found in FMFM 7-1, *Fire Support Coordination*; FMFM 7-4, *Field Artillery Support*; FM 23-91, *Mortar Gunnery*; FM 6-40, *Field Artillery Cannon Gunnery*; and FM 6-40-5, *Modern Battlefield Cannon Gunnery*.

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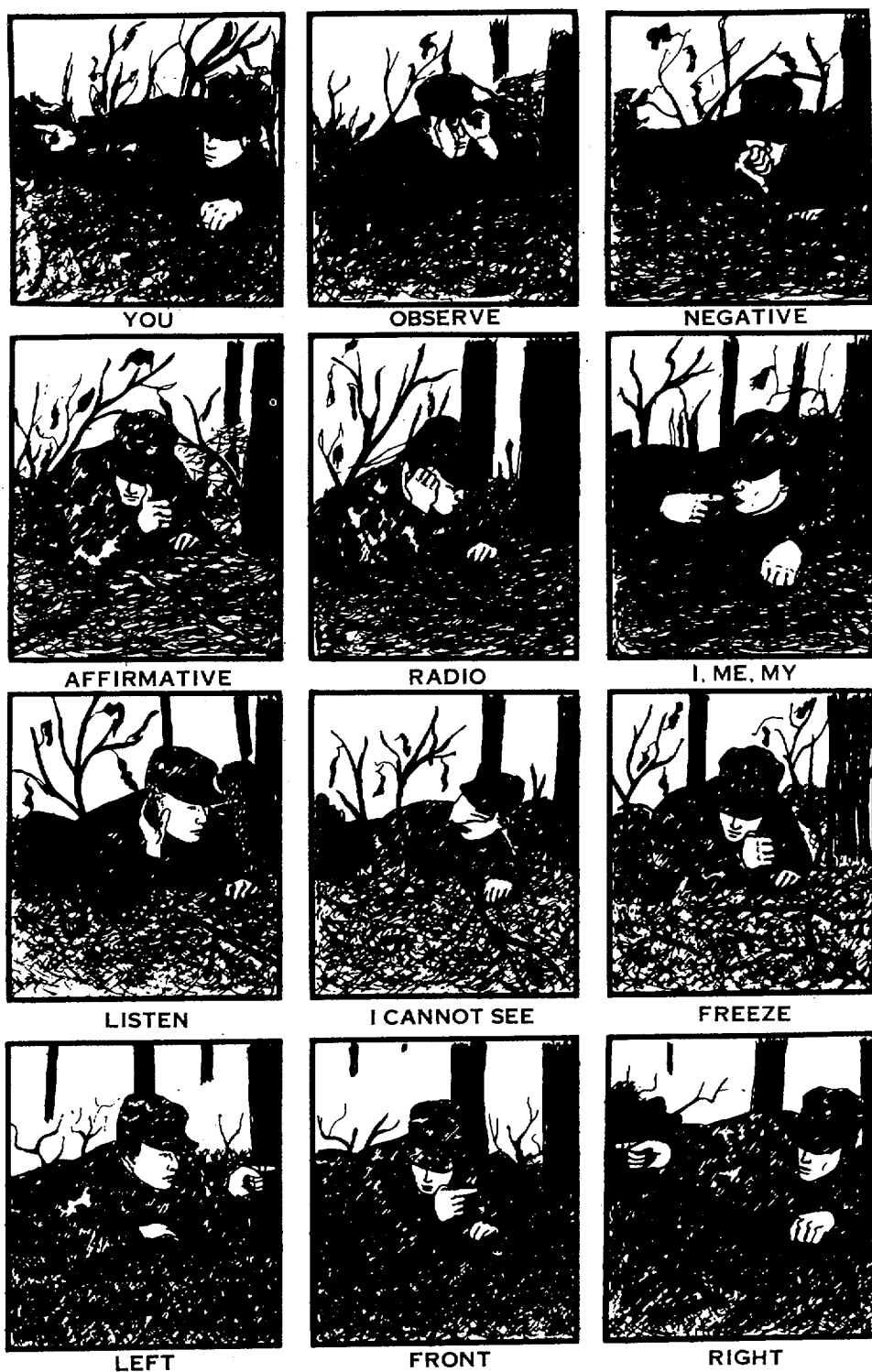


Figure 7-9. Arm-and-Hand Signals.

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FIRE PLAN SKETCH (OVERLAY)

The sniper team leader should submit a fire support plan sketch for approval to the sniper employment officer or the supported infantry commander for preplanned 81mm mortar and artillery fires to support the sniper mission. These fires are assigned a target number and become "on call" targets.

The fire support plan should show primary and alternate routes, checkpoints, objective rallying point, and the tentative final firing position.

Fires should be planned in several categories:

- Deceptive fires to conceal movement noise and to confuse the enemy.
- Firing along route (possibly on checkpoints) to eliminate enemy from the route. A specific pattern of firing should not be planned, such as firing on checkpoint 1, checkpoint 2, checkpoint 3, etc.
- Firing on possible enemy locations (key terrain, etc.).
- Fires planned to cover withdrawal or extraction.

SNIPERS SHOULD CLOSELY ADHERE TO THE PLANNED ROUTES (THUS, THE NECESSITY OF DETAILED PLANNING AND TERRAIN ANALYSIS) TO PRECLUDE RUNNING INTO OTHER FRIENDLY UNITS OR FIRES.

FIRE SUPPORT CONTROL

Only basic, initial calls for fire are covered, enough to allow the snipers to get that first round or rounds out. For more detailed information on subsequent corrections and control of fire support, see FM 6-40 and FM 6-40-5.



ALL SNIPERS MUST BE EXPERTS IN THE CONTROL AND PLANNING OF ALL TYPES OF FIRE SUPPORT

Figure 7-10. Sniper With Radio.

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FIRE SUPPORT PLAN SKETCH IN OVERLAY FORMAT

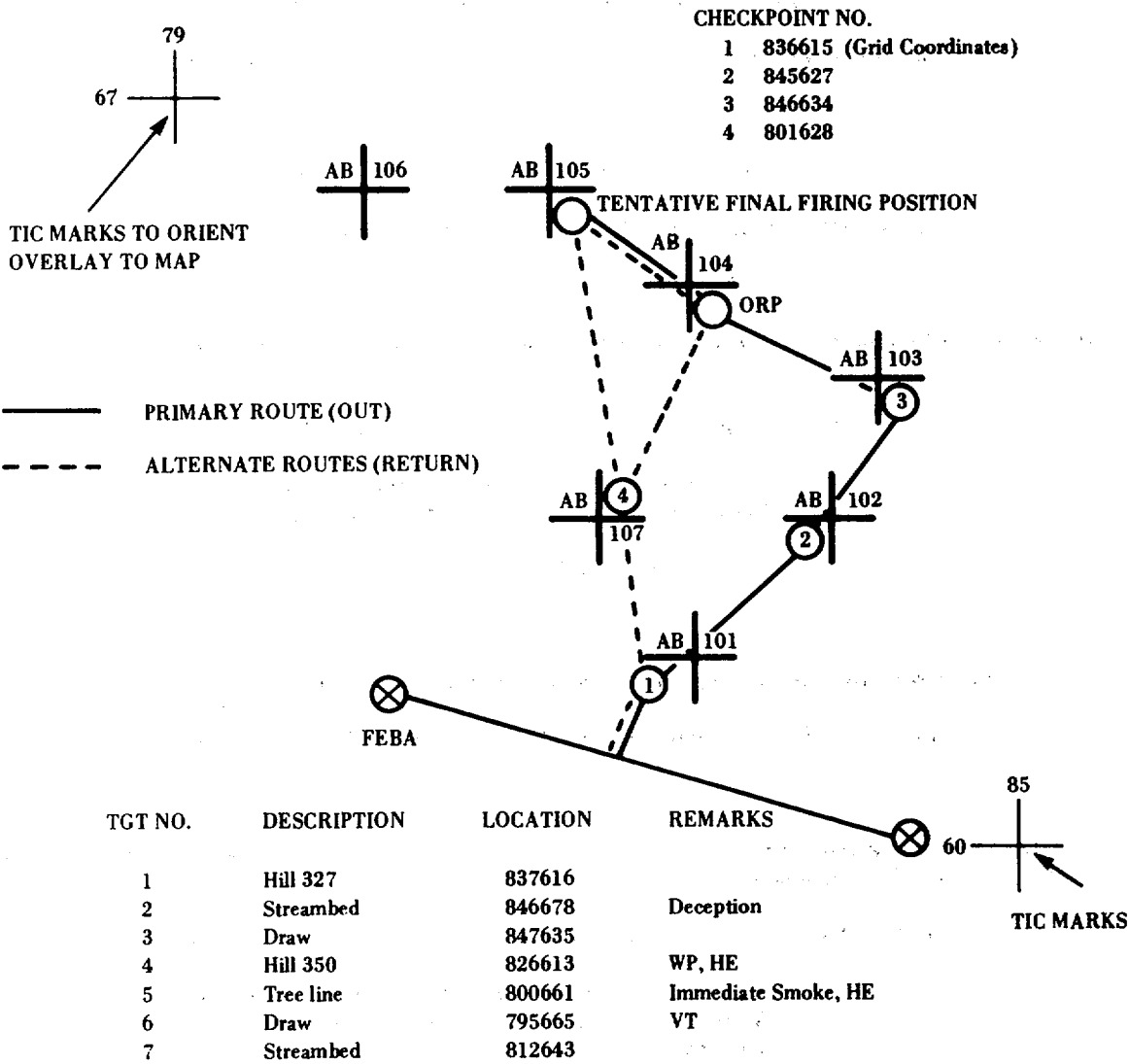


Figure 7-11. Fire Plan Sketch.

If the target is an "on call" target already planned for and assigned a target number on the fire plan sketch, the call for fire consists of the following:

H-24, THIS IS H-18, SUPPRESS AB101, OVER

(Call Sign of Fire Direction Center (FDC)) (Call Sign of Sniper) (Target Number)

If the target is in an "on call" status and has taken the sniper under fire, the call for fire consists of the following:

H-24, THIS IS H-18, IMMEDIATE SUPPRESSION AB101, OVER

If a target of opportunity presents itself, the grid coordinate method of target location is the easiest. The call for fire consists of the following:

H-24, THIS IS H-18, FIRE FOR EFFECT, OVER

The fire direction center will then read back the call for fire;
the sniper transmits the grid coordinates of the target.

GRID 180513, OVER

If a target not in an "on call" status takes the snipers under fire, the grid mission is transmitted as follows:

H-24, THIS IS H-18, IMMEDIATE SUPPRESSION, GRID 18Q513, OVER

Smoke is termed the "thinking man's ammunition" and can be placed between the sniper and the advancing enemy to conceal the sniper's withdrawal. The call for fire is as follows:

H-24, THIS IS H-18, IMMEDIATE SMOKE, GRID 180513, OVER

For Artillery: Immediate smoke missions are fired with a mix of WP and HC for quick buildup, so the sniper should be careful in planning the grid location of the target area. Smoke can be PRE-PLANNED as well.

To REPEAT fires (when the sniper desires more rounds in the same location specified in the call for fire), the sniper says:

H-24, THIS IS H-18, REPEAT, OVER

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708. ZONE BRIEFS

The sniper team leader must plan for immediate extraction, should it become necessary. This should be preplanned, when possible, to be picked up at a specific checkpoint or the objective rallying point (ORP). *When in trouble, the snipers should call for fire, possibly smoke, and withdraw along a preplanned route to a pickup zone where they can be picked up by helicopter.* If unable to withdraw, the sniper can be picked up by "spie rig," again under the cover of sniper planned fire support.

If the hide is properly constructed, the possibility of needing an immediate extraction is greatly reduced, as the enemy will not be able to see it even while standing on top of the hide.

If an infantry backup force is employed, they can aid in extracting the sniper team.

When giving a zone brief, the sniper must talk clearly, quickly, and accurately.

Snipers MUST know the frequency and call sign of the helicopters.

HELICOPTER ZONE BRIEF

- Identification (call signs) (immediate extraction).
- Description of landing zone (size, shape, secure, or insecure).
- Ground obstacles in and around landing zone.
- Wind direction and velocity.
- Obstacles in approach path.
- Time/direction of last enemy fire.
- Suspected enemy positions/heavy caliber weapons.
- Direction from which enemy fire is most likely.
- Approach direction for helicopter (land helicopter into the wind).
- Direction cleared to return fire.
- MEDICAL EVACUATION ONLY: Number, precedence, and type wounded.
- Landing zone marking (mark with smoke, make pilot identify color).

TALK THE PILOT INTO THE SNIPER POSITION USING THE CLOCK SYSTEM—THE DIRECTION HIS NOSE IS POINTING IS 12 O'CLOCK

SPECIFY THE NEED TO BE PICKED UP BY SPIE RIG IF THE TEAM AND HELICOPTERS HAVE THE CAPABILITY AND IF THE SNIPERS ARE STILL UNDER HEAVY FIRE

APPENDIX A

RANGE ESTIMATION TABLES

TABLE OF MILS FOR PERSONNEL
6 FEET, 5 FEET 9 INCHES, AND 5 FEET 6 INCHES

<u>MILS</u>	<u>6 FEET = 2 YARDS</u>	<u>5 FEET 9 INCHES = 1.9 YARDS</u>	<u>5 FEET 6 INCHES = 1.8 YARDS</u>
1	2000	1900	1800
1-1/4	1600	1520	1440
1-1/2	1333	1266	1200
1-3/4	1143	1085	1028
2	1000	950	900
2-1/4	888	844	800
2-1/2	800	760	750
2-3/4	727	690	654
3	666	633	600
3-1/4	615	584	553
3-1/2	571	542	514
3-3/4	533	506	480
4	500	475	450
4-1/4	470	447	423
4-1/2	444	422	400
4-3/4	421	400	378
5	400	380	360
5-1/4	380	361	342
5-1/2	362	345	327
5-3/4	347	330	313
6	334	316	300
6-1/4	320	304	288
6-1/2	308	292	277
6-3/4	296	281	266
7	286	271	257
8	250	237	225
9	222	211	200
10	200	190	180

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TABLE OF MILS FOR OBJECTS

FEET		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
YARDS		1	1.3	1.7	2	2.3	2.7	3	3.3	3.7	4	4.3	4.7	5	5.3	5.7	6		
MILS	2	500	650	850	1000	1150	1350	1500	1650	1850	2000	2150	2350	2500	2650	2850	3000		
	2.5	400	520	680	800	920	1080	1200	1320	1480	1600	1720	1880	2000	2120	2280	2400		
	3	333	425	566	665	766	900	999	1100	1230	1332	1433	1566	1665	1766	1900	1998		
	3.5	285	371	486	571	657	771	855	943	1057	1140	1229	1343	1425	1514	1629	1710		
	4	250	325	425	500	575	675	750	825	925	1000	1075	1175	1250	1325	1425	1500		
	4.5	222	289	370	444	511	600	666	733	822	888	950	1044	1110	1178	1267	1332		
	5	200	260	340	400	460	540	600	660	740	800	860	940	1000	1060	1140	1200		
	5.5	182	236	309	362	418	491	543	600	673	724	782	855	905	964	1036	1036		
	6	167	217	283	334	383	450	500	550	617	668	717	783	835	883	950	1000		
	6.5	154	200	262	308	354	415	432	503	569	616	662	723	770	815	877	924		
	7	143	186	243	286	329	386	429	471	529	572	614	671	715	757	814	858		
	7.5	133	173	227	266	307	360	399	440	493	532	573	627	665	707	760	795		
	8	125	163	213	250	288	338	375	413	463	500	538	588	625	663	713	750		
	8.5	118	153	200	234	271	318	351	388	435	468	506	553	585	624	671	702		
	9	111	144	189	222	256	300	333	367	411	444	478	522	555	589	633	646		
	9.5	105	137	178	210	242	284	315	347	389	420	453	495	525	559	600	630		
MILS	10	100	130	170	200	230	270	300	330	370	400	430	470	500	530	570	600		
	10.5								314	352	381	410	448	476	505	543	511		
	11								300	336	367	390	427	455	482	518	545		
	11.5									322	348	374	409	435	461	496	522		
	12									308	333	353	392	417	442	475	500		
	12.5										320	344	376	400	424	456	480		
	13										308	331	362	385	408	438	462		
	13.5											319	348	370	393	422	444		
	14											307	336	357	379	407	429		
	14.5	1)	ESTIMATE HEIGHT OF TARGET AND LOCATE ACROSS THE TOP											324	345	366	393	414	
MILS	15													313	333	353	380	400	
	15.5	2)	MEASURE HEIGHT OF TARGET IN MILS AND LOCATE DOWN THE SIDE											303	323	342	368	387	
	16													313	325	356	375		
	16.5	3)	MOVE DOWN FROM THE TOP AND RIGHT FROM THE SIDE TO FIND THE RANGE IN YARDS											303	321	345	364		
	17														312	335	353		
	17.5														302	326	343		
	18															317	333		
	18.5		$\frac{\text{HEIGHT OF TARGET (YARDS)} \times 1,000}{\text{HEIGHT OF TARGET (MILS)}} = \text{RANGE (YARDS)}$															308	324
	19																300	316	
	19.5																	308	

APPENDIX B**BASIC SNIPER TRAINING SYLLABUS****1. HOURLY BREAKDOWN OF 8-WEEK PERIOD OF INSTRUCTION**

HOURS	SUBJECT
4	Zeroing
20	Unknown Distance Firing
46	Stationary Target Firing
31	Moving Target Firing
8	Night Firing Under Artificial Illumination
15	Shooting Tests—Stationary/Moving Targets
30	Sniper/Marksmanship Related Classes
20½	Fire Support Planning/Control
50	Mission Planning
11½	Employment
16	Close Combat
42	Mapping/Aerial Photograph Instruction (6 Application Exercises)
1½	Written Test
44	Stalking Exercises (11 Exercises)
11	Range Estimation Exercises (11 Exercises)
11	Observation Exercises (11 Exercises)
6	Concealment Exercises (3 Exercises)
10	Hide Construction (1 Exercise)
48	Mission Exercises (2 Exercises, Each Covering a 24-Hour Period)
16	Tactical Exercise Without Troops (TEWT) (4 Exercises)
8½	Kim's Game
<hr/> 450	<hr/> TOTAL HOURS

2. SNIPER PROFICIENCY TRAINING

The purpose of proficiency training is to enable the qualified sniper to maintain the degree of skill and proficiency to which he was trained. Proficiency training should be conducted quarterly in all sniper skills, although special emphasis should be made on marksmanship and stalking. These should be practiced as frequently as possible. Every effort should be made to maintain sniper proficiency.

Snipers should be requalified each year in all sniper skills. They should also be "quizzed" and/or tested every quarter.

Proficiency training should be conducted to the same degree of standards as it was originally taught so as not to lose any effectiveness in combat. If a sniper is not retrained quarterly, his quality of performance will decrease; therefore, he will not meet the standards of the Marine Corps scout sniper.

SNIPERS MUST BE INCLUDED, IN THE SNIPER ROLE, IN ALL NORMAL INFANTRY TACTICAL TRAINING AND IN TACTICAL EXERCISES.

APPENDIX C**MARKSMANSHIP EXERCISES**

Marksmanship takes up a large portion of sniper training, both in schools and in proficiency training. The sniper may be proficient in all other areas of training, but without marksmanship, other areas are useless. There are five different marksmanship phases a sniper student must complete. They are:

- Stationary targets.
- Moving targets.
- Unknown distance firing.
- Firing under artificial illumination.
- Marksmanship test.

The following pages will consist of a lesson plan-type explanation of how to set up and conduct each of the firing exercises mentioned above.

1. STATIONARY TARGET FIRING

The purpose of stationary target firing is to make the sniper proficient in firing at stationary targets ranging from 300 to 1,000 yards.

The sniper student is given at least 10 rounds to fire at each yard line, starting from the 300-yard line and moving back to 1,000 yards.

DESCRIPTION

On a known distance range, it is necessary to ensure that:

- Communication equipment is available and functioning.
- Targets, carriages, extra uprights, pasters, and spotters are available.
- Ammunition is available.
- A range safety officer must be available, as well as a corpsman and an emergency vehicle.

**RECONNAISSANCE BY THE
CONDUCTING OFFICER/NCO**

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CONDUCT OF THE EXERCISE

The class must be split in half so that there is an even number of personnel in the pits and on the line.

On the line, the student will be issued his ammunition and briefed on the following:

- Aim of the exercise.
- Safety precautions on the line.
- What target to shoot at (per team).
- How many rounds per yard line.
- Time limit per shot.
- Standard to be achieved.

In the pits, the students will be briefed on the following:

- Procedures for pulling, marking, and spotting targets.
- Pit commands to be used.
- Safety precautions in the pits.

There should be two students per target on the line and in the pits.

The students will be positioned on each firing point so that one is firing, while the other is laying behind and to the right of the shooter observing wind conditions and plotting the shots (for a right handed shooter).

On the command, "LOAD AND BE READY," the student will chamber a round and place the weapon in his shoulder with the safety on.

On the command, "COMMENCE FIRING WHEN YOUR TARGET APPEARS," the students will fire all their allotted rounds for that yard line, one at a time, while the observer calls the wind and plots each shot.

At this point of the exercise, the line officer and/or instructors should be especially watchful for safety violations and weapon and ammo malfunctions.

Once the first student has fired all of his allotted rounds, the command, "CEASE FIRING ON THE LINE," will be given, followed by, "IS THE LINE CLEAR?" The weapons will be taken out of the shoulders and placed on "safe." The instructors will check the chambers.

The students on the line will then exchange positions on each firing point and wait for the commands.

The line officer will notify the pit officer when he will commence firing. The pit officer will, in turn, notify the target pullers with the command, "STAND BY TO RUN YOUR TARGETS IN THE AIR."

The pit officer will then say, "TARGETS, RUN THEM UP," upon which the students will raise the targets.

When a shot hole appears in the target, the puller will pull down the target, put a spotter in the shot hole and run the target back up, showing the shooter where he hit.

When the next shot hole appears, the puller will again pull down the target, move the spotter from the old shot hole to the new shot hole, paste the old shot hole and run the target back up. This procedure will be repeated until all rounds have been fired and the pit officer announces, "THE PITS ARE CLEAR. CHANGE OVER."

The personnel in the pits will replace the personnel on the line and vice versa.

The targets used for all stationary firing will be the Standard "B" Modified Requalification Target, or an FBI silhouette. *Student should fire from the supported prone position in most cases.*

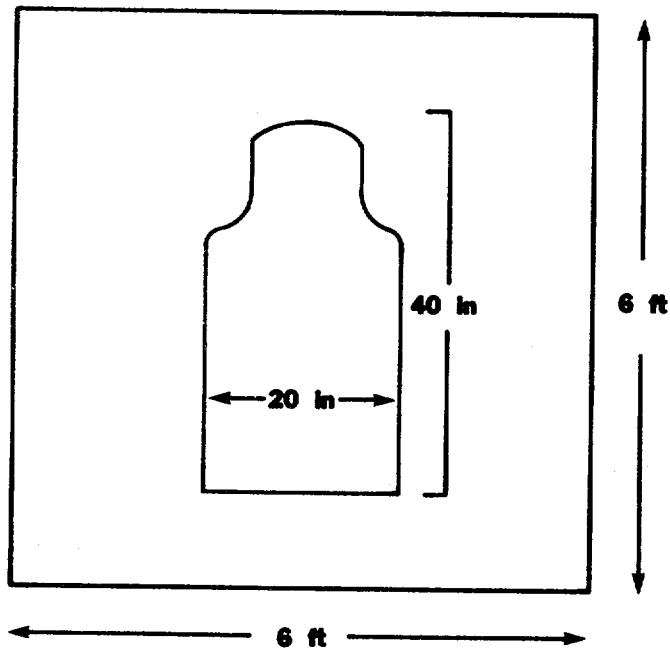


Figure C-1. Standard "B" Modified Requalification Target.

2. MOVING TARGET FIRING

The purpose of moving target firing is to make the sniper proficient in firing at moving targets ranging from 300 to 800 yards.

The students are given at least 10 rounds to fire at moving silhouettes at ranges from 300 to 800 yards. The targets move 8- to 10-target frames, perpendicular to the student on the firing line, and will then move back 8- to 10-target frames in the direction whence they came.

DESCRIPTION

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**RECONNAISSANCE BY THE
CONDUCTING OFFICER/NCO**

On the range to be utilized, the conducting officer or NCO must ensure that:

- Communication equipment is available and functioning.
- Targets, pasters, and spotters are available.
- Ammunition is available.
- A range safety officer must be available, as well as a corpsman, and an emergency vehicle.

CONDUCT OF THE EXERCISE

The class is split in half so that there is an even number of personnel on the line and in the pits.

On the line, the student will be issued ammunition and briefed on the following:

- Aim of the exercise.
- Safety precautions on the line.
- What target "sector" to shoot at.
- How many rounds per yard line.
- Time limit per shot.
- Standard to be achieved.

In the pits, the students will be given all the necessary equipment; i.e., targets, spotters, etc., and will be briefed on the following:

- Procedures for "walking the target."
- Procedures for pulling, marking, and spotting the target.
- Safety precautions in the pits.
- Pit commands to be used.

There should be two students for each target on the line and in the pits.

The target used for moving targets will be the "E" type pistol silhouette (cut to 12 inches wide) attached to a long stick or pole (usually 2 target frame sticks nailed together) and carried across the catwalk between 8 to 10 target frames, usually referred to as a "sector."

When the pit officer/NCO gives the command, "PUT YOUR TARGETS IN THE AIR," the students will raise the target approximately 2 to 3 feet above the butts.

The next command is "GO," where the students will walk at a normal pace (approximately 2 to 3 miles per hour) from their left limit to their right limit.

If the student gets a hit on the target while he is walking, he immediately pulls the target down and puts a spotter in the shot hole. He then runs the target back up while walking to his far limit, where he will quickly clear and paste the target, waiting for the commands to be repeated.

On the next shot, the pit puller walks back to his original point, at the same pace, with his target in the air to be shot at. He will repeat this back and forth procedure (by commands) until the shooter has completed firing. While one man is walking the target, the other is keeping score.

Scoring is a hit-or-miss system. If the shot hits the silhouette, it is scored as a hit. If it does not hit the silhouette, it is a zero.

On the line, the students will be positioned in teams on separate firing points, two men per point. One man shoots, while the other observes wind, adjusts the shooter's leads, and plots the shots in his partner's data book.

The line officer/NCO will give the command, "LOAD AND BE READY," and the student will assume a supported prone position, chamber a round, put the safety switch on safe, and wait for the next command.

The next command will be "COMMENCE FIRING WHEN YOUR TARGETS APPEAR."

The targets will come up and move to the right or left, and the sniper student must shoot the target before it reaches its sector limit. At this point, the line officer and/or instructors must be especially watchful for safety violations and weapon or ammunition malfunctions.

When the student is finished firing all his rounds, the "clearing" commands will be given and the student will change positions with his partner, and the above procedures will be repeated.

Once the two students on the line have finished firing all the yard lines, they will switch with the students in the pits.

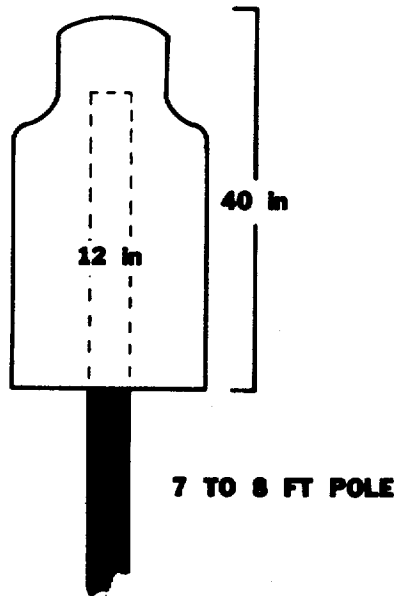


Figure C-2. The "E" Type Pistol Silhouette.

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3. UNKNOWN DISTANCE FIRING

The purpose of this exercise is to make the sniper student knowledgeable in range estimation and proficient in engaging targets at unknown ranges.

DESCRIPTION

The sniper team must fill out a range card and field sketch prior to the firing exercise. They must then use their range estimations on the range card to engage their targets.

RECONNAISSANCE BY THE CONDUCTING OFFICER/NCO

There are certain requirements in unknown distance firing exercises unique to all other firing exercises. These requirements are:

- A large area, at least 1,000 yards long and 300 yards wide, with many types of terrain features.
- Five targets should be made for each team, with the team number on the target for easy identification by the team members.
- A range safety officer must be present during all firing, along with a corpsman and emergency vehicle.
- Ammunition must be available.

CONDUCT OF THE EXERCISE

The students will be brought out to the area, prior to firing, and told to fill out range cards and make field sketches (which will be graded as well as the firing scores).

Each team will be given five targets, set at ranges unknown to the students.

Each sniper student will fire two rounds per target at ranges up to 1,000 yards. Each target will have the team's assigned number painted on them and will be set at five different unknown ranges;

On command from the conducting officer/NCO, the students will engage their targets with a time limit of 20 minutes per team.

After each student has completed firing, the line will be cleared and the students allowed to go out to score and paste the targets.

Targets will be scored as 5 points per hit. Total team points is 100. Passing score for this firing exercise will be 80 percent of the total points available per man (40 points).

The targets used for unknown distance firing will be the full and partial "M" type standing silhouette.

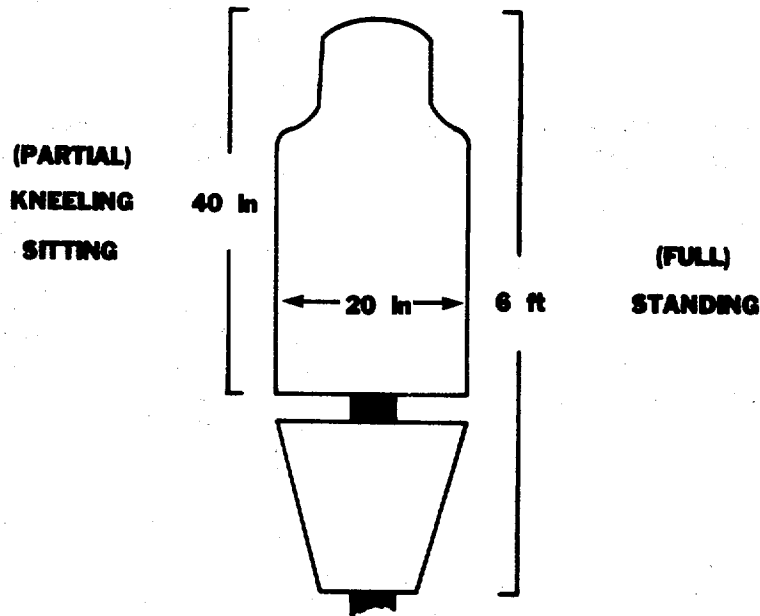


Figure C-3. Full and Partial "M" Type Standing Silhouette.

4. FIRING UNDER ARTIFICIAL ILLUMINATION

The purpose of this exercise is to make the sniper proficient in the proper holds for stationary targets and the proper leads for moving targets at distances ranging from 300 to 600 yards under artificial illumination.

The sniper students will fire at stationary targets and moving targets under artificial illumination at distances ranging from 300 to 600 yards. Both stationary and moving target firing should be conducted on separate nights due to the time involved to conduct one exercise.

DESCRIPTION

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RECONNAISSANCE BY THE CONDUCTING OFFICER/NCO

Most of the requirements are the same as for other firing exercises, but there are some requirements unique to artificial illumination firing.

- "POP-UP" flares must be made available. They are White Star Illumination Flares with the DODIC number designation L312. To determine the amount needed, multiply the number of rounds per student by the amount of relays firing, then add 10 extra flares due to misfires and duds.
Example: 20 rounds per student x 4 relays = 80 + 10 extra = 90 flares. 100 flares would be a safe figure.
- Both stationary and moving targets must be made available, along with spotters and pasters.
- Flashlights for line and pit use must be available.
- Communication equipment must be available and functioning.
- A range safety officer must be present, as well as a corpsman and an emergency vehicle.
- Ammunition must be available.

CONDUCT OF THE EXERCISE

The conduct of the exercise will be explained in two sections (stationary targets and moving targets), since both exercises should not be fired on the same night.

STATIONARY TARGET FIRING UNDER ARTIFICIAL ILLUMINATION

Three to four hours should be set aside to fire this night exercise.

Set up the range and pits in the same manner as in the daytime stationary target firing exercises.

The time limit per round will be the time during which the flare is illuminating the range. When a flare goes up, firing commences. Firing ceases after each round when the flare goes out.

An instructor fires the flares one at a time, either from the line or pits, whichever is more convenient in adjusting the flare to the wind.

The instructor fires the flare according to the wind, so that the maximum amount of light will be on the targets for a maximum amount of time (duration of the flare).

When the instructor fires the flare, the student must fire one round while the flare is lit. The pit puller will pull and spot the target and run it back up before the flare goes out so the partner on the line can plot the shot in the data book.

If the student does not fire while the area is illuminated, he receives a miss. If he fires just before the flare goes out, the pit puller will spot the target on the next flare or with the flashlight.

The students must get 80 percent hits to pass the exercise.

The line procedures are the same as in the stationary target illumination firing.

The pit procedures are somewhat complicated and must be executed in a coordinated manner.

When the flare is launched, the sound of its launching can be heard in the pits. At this point, the targets are put in the air.

When the flare ignites, the pit puller starts walking the target across his assigned sector.

The student must fire during the illumination. If he does not fire, he receives a miss.

Due to the time involved in walking the target 8- to 10-target areas, the spotting of the targets will be done on the next flare so that the observer can adjust the shooter's lead.

When firing is finished, the range area should be checked for fires caused by drifting flares. If a fire is spotted, and is small enough, extinguish it; if it is becoming a large brush fire or looks like it might develop into a large fire, call the fire department immediately. Police up all flare debris.

The targets used for stationary target illumination firing will be the standard stationary target. The "B" modified standard requalification target or an FBI silhouette.

The targets used for moving target illumination firing will be the standard moving target. The "E" type pistol silhouette cut to 12-inches wide and mounted on a 7- to 8-foot stick or pole. (See par. 2)

5. MARKSMANSHIP TEST

The purpose of the marksmanship test is to evaluate the student in his ability to engage 35 designated targets at various ranges, scoring one point per hit with 80 percent accuracy.

MOVING TARGET FIRING UNDER ARTIFICIAL ILLUMINATION

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DESCRIPTION

The student will be required to engage stationary targets at ranges from 300 to 1,000 yards and moving targets at ranges from 300 to 800 yards and must get at least 28 total hits (80 percent of 35 possible hits).

RECONNAISSANCE BY THE CONDUCTING OFFICER/NCO

Communication equipment must be available and functioning.

Stationary and moving targets must be available, along with spotters, pasters, and extra target repair centers.

Scorecards for the pits and line must be available (only the pit score will be valid); verifiers should be present.

A range safety officer must be present, as well as a corpsman and emergency vehicle.

A 1,000-yard known distance range is needed.

CONDUCT OF ENGAGING STATIONARY TARGETS FROM 300 TO 1,000 YARDS

Each team will be assigned a block of eight targets, each block of which will be designated with the left and right limits marked with a 6-foot x 6-foot target mounted in two respective carriages. Thus, the right limit for one block will also serve as the left limit of the next block. The following targets will serve as left and right limits respectively: 1, 8, 15, 22, 29, 36, and 43. The stationary target will be mounted in the left limit target carriage of each block.

The first stage of fire at each yard line (300, 500, 600, 700, 800, 900, and 1,000) will be stationary targets from the supported prone position. Command will be given from the center of the line to load one round. The sniper and partner will have 3 minutes to judge wind, light condition, proper elevation hold, and fire three rounds with the target being pulled and marked after each shot. After the 3-minute time limit has expired, all stationary targets will be pulled down, cleared, and will remain in the pits. There will not be a changeover between sniper and observer until the sniper has engaged his moving targets, which should begin immediately after pulling the stationary targets in the pits.

CONDUCT OF ENGAGING MOVING TARGETS FROM 300 TO 800 YARDS

Each student will remain at their respective firing point after engaging stationary targets, so they can engage their moving targets within the assigned block of eight targets. One of the butt pullers will position himself at the left limit with the moving target, ready to move when the stationary stage is completed.

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The second stage of fire at each yard line (300, 500, 600, 700, and 800) will be moving targets. The command will be given from the center of the line to load two rounds. Once the entire line is ready, a moving target will appear on the left limit of each block of targets, moving left to right. The sniper and partner will have approximately 15 to 20 seconds (the amount of time it takes the student to walk from the left limit to the right limit) in which to fire one round. The next target will move from the right limit to the left, and again, the sniper and his partner will have 15 to 20 seconds to fire one round. The target will be run up after each hit. It will also be up to the partner to advise the sniper on where his rounds are impacting (high, low, left, and right).

Moving targets will not be engaged past 800 yards. Therefore, five rounds will be fired and scored on stationary targets at 900 yards and 1,000 yards.

It will be the responsibility of the line officer/NCO to see that the entire test is run smoothly and safely. He will:

CONDUCT OF THE LINE OFFICER/NCO

- Be the deciding factor should any complications or differences arise.
- Be responsible for briefing the pit officer/NCO on the conduct of the test and any other major items that he can foresee that will aid him in controlling the conduct of the test.
- Ensure that all commands are given clearly and precisely and that all students are allotted the same amount of time for firing.
- Ensure the required amount of ammunition is present and the appropriate range is signed out.
- Be responsible for the police of all firing lines.

It will be the responsibility of the pit officer/NCO to see that the test is run smoothly and safely for all personnel in the pits. He will:

CONDUCT OF THE PIT OFFICER/NCO

- Contact the line officer/NCO should any complications or differences arise in the pits.
- Be responsible for briefing all students as to the conduct of fire and the pit procedures for that particular portion of the test.

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- Ensure all commands are given clearly and precisely and the individuals on each block of targets record the number of hits received during both stages of fire.
- Ensure that the required amount of targets are readily available and that each block of targets is correctly implaced and properly manned.
- Be directly responsible for the police of the pit area.

TEST SCORING

Scoring will be conducted on the firing line as well as in the pits. Each student will fire 35 rounds at an assortment of stationary and moving targets from 300 to 1,000 yards. Each round will be valued at 1 point with a total value of 35 points. Passing score for the test is 80 percent of a “possible” score, which is 28 hits. A miss will be scored as zero. Final score will be determined by the pit score, and the verifiers.

Snipers will be given several rounds at 300 yards to check their “zero” prior to starting the test.

SNIPER QUALIFICATION COURSE

STAGE	YARD LINE	* TARGET TYPE	TARGETS FIRED	NO. ROUNDS		SCORE
				RECEIVED ON	TARGET	
1	300	S	3	3		3
2	300	M	2	2		2
3	500	S	3	3		3
4	500	M	2	2		2
5	600	S	3	3		3
6	600	M	2	2		2
7	700	S	3	3		3
8	700	M	2	2		2
9	800	S	3	3		3
10	800	M	2	2		2
11	900	S	5	5		5
12	1,000	S	5	5		5
						35 Points

*S = STATIONARY
M = MOVING

APPENDIX D

SNIPER TRAINING EXERCISES

1. STALKING EXERCISES

The purpose of stalking exercises is to give the sniper confidence in his ability to approach and occupy a firing position without being observed.

Having studied a map (and aerial photograph, if available), individual students must stalk for a predesignated distance, which could be 1,000 yards or more, depending on the area selected. All stalking exercises and tests should be approximately 1,000 yards with a 4-hour time limit. The student must stalk to within 150 to 200 yards of two trained observers, who are scanning the area with binoculars, and fire two blanks without being detected.

DESCRIPTION

The area used for a stalking exercise must be chosen with great care. An area in which a student must do the low crawl for the complete distance would be unsuitable. The following items should be considered:

RECONNAISSANCE BY THE CONDUCTING OFFICER/NCO

- As much of the area as possible should be visible to the observer. This forces the student to use the ground properly, even when far from the observer's location.
- Where possible, available cover should decrease as the student nears the observer's position. This will enable him to take chances early in the stalk and force him to move more carefully as he closes in on his firing position.
- The students must start the stalk in an area out of sight of the observer.
- Boundaries must be established by means of natural features or the use of markers.

FMFM 1-3B

CONDUCT OF THE EXERCISE

In a location near the jumpoff point for the stalk, the student is briefed on the following:

- Aim of the exercise.
- Boundaries.
- Time limit (usually 4 hours).
- Standards to be achieved.

After the briefing, the students are dispatched at intervals to avoid congestion.

In addition to the two observers, there are two "walkers," equipped with radios, who will position themselves within the stalk area. If an observer sees a student, he will contact a walker by radio and direct him to within 5 feet of the student's location. Therefore, when a student is detected, the observer can immediately tell the student what gave him away.

When the student reaches his firing position, which is within 150 to 200 yards of the observer, he will fire a blank at an observer. This will tell the walker he is ready to continue the rest of the exercise. The walker will then move to within 10 yards of the student. The observer will search a 10-yard radius around the walker for the sniper student. If the student is undetected, the walker will tell him to chamber and fire his second blank. If the sniper is still unseen, the walker will then point in the student's direction, and the observer will search in detail for anything that indicates a human form, rifle, or equipment. If the sniper remains undetected, the walker will then move in and put his hand on the student's head. The observer will again search in detail. If the sniper student is not seen at this point, he must tell the walker which observer he fired at and what the observer is doing. The observer waves his hat, scratches his face, or makes some gesture that the student can identify when using his telescope. The sniper student must then tell the walker his exact range, wind velocity, and windage applied to the scope. If the sniper completes all of these steps correctly, he has passed the stalk exercise.

A critique is conducted at the conclusion of the exercise, touching on main problem areas.

CREATING INTEREST

To create interest and to give the students practice in observation and stalking skills, one-half of the class could be positioned to observe the conduct of the stalk. Seeing an error made is an effective way of teaching better stalking skills. When a student is caught, he should be sent to the observation post (OP) to observe the exercise.

2. RANGE ESTIMATION EXERCISES

Range estimation exercises are to make the sniper proficient in accurately judging distance.

The student is taken to an observation post, and different objects over distances of up to 1,000 meters are indicated to him. After time for consideration, he writes down the estimated distance to each object. He may use only his binoculars and rifle telescope as aids, and he must estimate to within 10 percent of the correct range (a 6-foot man-sized target should be utilized).

Each exercise must take place in a different area, offering a variety of terrain. The exercise areas should include dead space as well as places where the student will be observing uphill or downhill. Extra objects should be selected in case those originally chosen cannot be seen due to weather, or for other reasons.

DESCRIPTION

RECONNAISSANCE BY THE CONDUCTING OFFICER/NCO

CONDUCT OF THE EXERCISE

The students are brought to the observation post, issued a record card, and given a review on methods of judging distances and causes of miscalculation. They are then briefed on the following:

- Aim of the exercise.
- Reference points.
- Time limit per object.
- Standard to be achieved.

Students are spread out and the first object is indicated. The student is allowed 3 minutes to estimate the distance and write it down. The sequence is repeated for a total of eight objects. The cards are collected, and the correct range to each object is given. The instructor points out in each case why the distance might be underestimated or overestimated. After correction, the cards are given back to the students. In this way, the student retains a record of his performance.

STANDARDS

The student is deemed to have failed if he estimates three or more distances incorrectly.

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3. OBSERVATION EXERCISES

The purpose of observation exercises is to practice the sniper's ability to observe an enemy and accurately record the results of his observations.

DESCRIPTION

The student is given an arc of about 1,800 mils to observe for a period of not more than 40 minutes. He is issued a panoramic sketch of his arc and is expected to plot on the sketch any objects he sees in his area. Objects are so positioned as to be invisible to the naked eye, indistinguishable when using binoculars, but recognizable when using the spotting telescope.

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In choosing the location for the exercise, the following points should be considered:

- Number of objects in the arc.
- Time limits.
- Equipment which they are allowed to use (binoculars and spotting telescopes).
- Standard to be attained.

Each student takes up the prone position on the observation line and is issued a panoramic sketch of the area. The staff is available to answer questions about the sketch if a student is confused. (If the class is large, the observation line could be broken into a right and left half. A student could spend the first 20 minutes in one half and then move to the other. This ensures that he sees all the ground in the arc.) At the end of 40 minutes, all sheets are collected and the students are shown the location of each object. This is best done by the students staying in their positions and watching while a member of the staff points out each object. In this way, the students will see why they failed to find an object, even though it was visible. (Students should view first with binoculars and then with spotting telescopes before the instructor picks the item up.)

A critique is then held, bringing out the main points.

Students are given half a point for each object correctly plotted and another half point for naming the object correctly.

SCORING

The student is deemed to have failed if he scores less than 8 points out of a total of 12 points (12 disguised military objects).

STANDARDS

4. MEMORY EXERCISE (KIM'S GAME)

The purpose of the memory exercise is to teach the sniper student to observe and remember a number of unrelated objects. In combat, the sniper requires a good memory in order to report facts accurately, because he may not be in a position to write them down. The Kim's game is to help the student in observation techniques. The better he does on the Kim's games, the more confident he will be during the observation exercises.

The instructor places 12 small objects on a table. They could be anything from a paper clip to a 40mm round. He notes the name of each object and its most distinguishable features (color, shape, size, lettering, etc.).

PREPARATION

The students are placed in a circle around a covered table and told the purpose of the exercise. The instructor tells the students there are 12 objects on the table. He explains that they have a small amount of time to look and a slightly longer amount of time to write. This could range from 2 minutes to look and 2½ minutes to write on the first exercise to 20 seconds to look and 30 seconds to write on the last exercise. After the "looking" time limit is up, the students are given a time limit to write down what they saw. Papers are collected, and the objects are again displayed to show the students what they missed.

CONDUCT OF THE EXERCISE

DEGREE OF DIFFICULTY

Successive games can be increased in difficulty by:

- Shortening the time limits to look and write.
- Creating distractions, such as music, noise, etc.
- Sending the students on a short run after they view the objects, then giving them a shorter amount of time to write.
- Having the students go on a scheduled field craft exercise after viewing the objects, then after returning (1 or 2 hours later), having them write down what they saw in the Kim's game.

5. HIDE CONSTRUCTION EXERCISE

The purpose of the hide construction exercise is to show the sniper how to build a hide and remain undetected while being observed. The purpose of a hide is to camouflage a sniper or sniper team which is not in movement.

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The sniper students are given 8 hours to build a temporary hide large enough to hold a sniper team with all their necessary equipment.

The hide exercise area should be selected with great care. It can be in any type of terrain, but there should be more than enough prospective spots in which to build a hide. The area should be easily bounded by left and right, far and near limits so that when the instructor points out the limits to the students, they can be easily and quickly identified. There should be enough tools (i.e., axes, picks, shovels, and sandbags) available to accommodate the entire class. There must be sufficient rations and water available to the students to last the entire exercise, which is about 9½ hours total—8 hours construction, 1½ hours testing.

CONDUCT OF THE EXERCISE

The students are issued a shovel, ax, pickax, and approximately 20 sandbags per team. The students are brought to the area and briefed on the purpose of the exercise, their time limit for construction, and their area limits. The students are then allowed to begin construction of their hides.

Note: During the construction, an instructor should be present at all times to act as an advisor.

At the end of 8 hours, the students' hides are all checked to ensure that they are complete. An infantry officer is brought out to act as an observer. He is placed in an area 300 yards from the hide area, where he starts his observation with binoculars and a 20X, M49 spotting scope. The observer, after failing to find a hide, is brought forward 150 yards and again commences observation.

An instructor in the field (walker with radio) then moves to within 10 yards of a hide and informs the observer. The observer then tells the walker to have the sniper in the hide to load and fire his only round (blank). If the sniper's muzzle blast is seen, or if the hide is seen due to improper construction, the team fails, but they remain in the hide. These procedures are repeated for all the sniper teams. The observer is then brought down to within 25 yards of each hide to determine whether they can be seen with the naked eye at that distance. The observer is not shown the hide. He must find it. If the sniper team is located at 25 yards, it fails and is allowed to come out and see its discrepancies. If the team is not seen, it passes.

DESCRIPTION

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OTHER REQUIREMENTS

The sniper teams should also be required to fill out a range card and a sniper's log book and make a field sketch. One way of helping them achieve this is to have an instructor showing "flash cards" from 150 yards away, beginning when the observer arrives and ending when the observer moves to within 25 yards. The sniper teams should record everything they see on the flash cards and anything going on at the observation post during the exercise.

STANDARDS

The sniper teams are required to pass all phases in order to pass the exercise. All range cards, log books, and field sketches must be turned in for grading and a final determination of pass or fail.

6. CAMOUFLAGE AND CONCEALMENT EXERCISES

Camouflage and concealment exercises are held to help the sniper student to select final firing positions.

The student conceals himself within 200 yards of an observer, who, using binoculars, tries to find the student. The student must be able to fire blank ammunition at the observer without being seen, and have the correct elevation and windage on his sight. The student must remain unseen throughout the conduct of the exercise.

DESCRIPTION

In choosing the location for the exercise, the instructor ensures that certain conditions are met. These are:

- There must be adequate space to ensure students are not crowded together in the area. There should be at least twice the number of potential positions as there are students. Once the area has been established, the limits should be marked in some manner (e.g., flags, trees, prominent features, etc.). Students should then be allowed to choose any position within the limits for their final firing position.
- The observer must be located where he can see the entire problem area.

As there will be several concealment exercises throughout the sniper course, different types of terrain should be chosen in order that the students may practice concealment in varied conditions. For instance, one exercise could take place in a fairly open area, one along a wood line, one in shrubs, and another in hilly or rough terrain.

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CONDUCT OF THE EXERCISE

The sniper is given a specified area with boundaries in which to conceal himself properly. The observers turn their backs to the area and allow the students 5 minutes to conceal themselves. At the end of 5 minutes, the observers turn and commence observation in their search for concealed snipers. This observation should last approximately one-half hour (more time is allotted, if desired). At the conclusion of observation, the observer will instruct, by radio, one of the two observers (walkers) in the field to move to within 10 meters of one of the snipers. The sniper is given one blank. If he cannot be seen after the walker moves within the 10 meters, the walker will tell him to load and fire his blank. The observer is looking for muzzle blast, vegetation flying after the shot, and movement by the sniper before and after he fires. If the student cannot be seen, the walker then extends his arm in the direction of the sniper, indicating his position. If the sniper remains unseen after indication, the walker goes to the sniper's position and places his hand, palm facing the observer, directly on top of the sniper's head. If the sniper passes all of the above, he must then state his elevation, windage, and what type of movement the observer is making.

To create interest and to give students practice in observation, one-half of the class may be positioned with the observer in order that they can profit from the mistakes of the other half of the class. When a student fails the exercise, he should go to the observation post to observe.

CREATING INTEREST

APPENDIX E

WINDAGE CONVERSION TABLE

RANGE IN YARDS	WIND VALUE	2 MPH		4 MPH		6 MPH		8 MPH		10 MPH		12 MPH		14 MPH		16 MPH		18 MPH		20 MPH	
		MIN.	IN.	MIN.	IN.	MIN.	IN.	MIN.	IN.	MIN.	IN.	MIN.	IN.	MIN.	IN.	MIN.	IN.	MIN.	IN.	MIN.	IN.
100	1/2	0	.073	1/8	.146	1/4	.219	1/4	.292	1/4	.365	1/2	.438	1/2	.511	1/2	.584	3/4	.657	3/4	.73
	FULL	1/8	.146	1/4	.292	1/2	.438	1/2	.584	3/4	.73	3/4	.876	1	1.022	1 1/4	1.168	1 1/4	1.314	1 1/2	1.460
200	1/2	0	.3	0	.6	1/2	.9	1/2	1.2	1	1.5	1	1.8	1	2.1	1	2.4	1	2.7	1 1/2	3.
	FULL	0	.6	1/2	1.2	1	1.8	1	2.4	1 1/2	3	2	3.6	2	4.2	2 1/2	4.8	2 1/2	5.4	3	6.
300	1/2	0	.7	1/2	1.4	1/2	2.1	1	2.8	1	3.5	1 1/2	4.2	1 1/2	4.9	2	5.6	2	6.3	2 1/2	7.
	FULL	1/2	1.4	1	2.8	1 1/2	4.2	2	5.6	2	7	2 1/2	8.4	3	9.8	4	11.2	4	12.6	4.5	14.
400	1/2	1/2	1.25	1/2	2.5	1	4.	1	5.25	1 1/2	6.5	2	7.75	2	9.	2 1/2	10.5	3	11.75	3	13.
	FULL	1/2	2.5	1	5.0	2	8.	2 1/2	10.5	3	13	4	15.5	4 1/2	18.	5	21	6	23.5	6 1/2	26.
500	1/2	1/2	2.0	1	4.0	1	6.5	1 1/2	8.5	2	11.	2 1/2	13.	3	15	3 1/2	17	4	19	4 1/2	21.5
	FULL	1	4.5	1 1/2	8.5	2 1/2	13.	3 1/2	17.	4	21.5	5	26.	6	30	7	34.5	8	38.5	8 1/2	43.
600	1/2	1/2	3.0	1	6.5	1 1/2	10.	2	13.	2 1/2	16	3	19.5	3 1/2	23	4 1/2	26	5	29	5 1/2	32.5
	FULL	1	6.5	2	13.	3	19.5	4 1/2	26.	5 1/2	32.5	6 1/2	39.	7 1/2	45.5	8 1/2	52	9 1/2	58.5	11	65.
700	1/2	1	5.	1	9.	2	14.	2 1/2	18.5	3	23	4	28	4 1/2	32.5	5	37	6	42	6 1/2	46.5
	FULL	1	9.5	2 1/2	18.5	4	28.	5	37	6 1/2	46.5	8	56	9 1/2	65	10 1/2	74.5	12	83.5	13	93.0
800	1/2	1	6.	1 1/2	13.	2	19.	3	25.5	4	32	5	38	5 1/2	44.5	6 1/2	51	7	57	8	63.5
	FULL	1 1/2	12.5	3	25.5	4 1/2	38	6 1/2	51	8	63.5	9 1/2	76	11	89	12 1/2	101.5	14	114.5	16	127
900	1/2	1	8.5	2	17	3	25	4	34	4 1/2	42	5 1/2	51	6 1/2	59	7 1/2	67	8 1/2	76	9 1/2	84.5
	FULL	2	17.	4	34	5 1/2	50.5	7 1/2	67.5	9 1/2	84.5	11	101.5	13	118.5	15	135	17	152	19	169
1000	1/2	1	11.	2	22	3	32.5	4.	43.5	5 1/2	54	6 1/2	65	7 1/2	76	8 1/2	87	10	98	11	108.5
	FULL	2	21.5	4	43.5	6 1/2	65.	8 1/2	87	10 1/2	108.5	13	130	15	152	17 1/2	173.5	19 1/2	195.5	21 1/2	217
1100	1/2	1	13.5	2 1/2	27	4	41	5	54.5	6	68	7 1/2	81.5	9	95	10	109	11	122.5	12	136
	FULL	2 1/2	27.	5	54.5	7 1/2	81.5	10	109	12	136	15	163	17	190.5	19 1/2	217.5	22	245	24 1/2	272

NOTE: All measurements of inches beyond 400 yards rounded off to nearest 1/2 inch.
 All computations from the Small Arms Ammunition Manufacturing Institute are for 173-grains boattail, at 2,600 feet per second;
 the difference between this and the 2,580 feet per second of the sniper rifle is negligible.

APPENDIX F

BUILDING TERRAIN MODELS

A terrain model is a scale model showing land forms, natural and man-made features, etc. Its main purpose is to provide a means for visualizing the terrain for planning and briefing of sniper missions, route selection, position selection, etc.

PURPOSE

The materials used in making terrain models consist of maps, aerial photographs, and current intelligence of the area involved. Maps provide the topographic information, aerial photos provide up-to-date changes of terrain and man-made features, while intelligence provides the situation information regarding both friendly and enemy forces.

MATERIALS

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There are infinite amounts of materials that can be used in making terrain models. They can be made anywhere out of almost any material available. Some of the items are: paint, plywood, cardboard, plaster, paper mache, cheese cloth, burlap, sawdust, cotton, wire, wood pegs, nails, sections of moss, sod, sand, etc. There are also different places to build them; in a wood box, a wash bucket, a hole in the ground, etc. Field expedients are never-ending.

CONSTRUCTION

One of the first factors to be considered in making a terrain model is the scale. Different type scales may be used depending on how large the model is to be. A simple scale of 1:2,000 taken from a 1:50,000 map would be:

50 centimeters	=	1,000 meters
5 centimeters	=	100 meters
1 centimeter	=	20 meters
1 millimeter	=	2 meters

**For additional information on how to build a terrain model,
see TM 5-249, *Terrain Models and Relief Map Making*,
Department of the Army, April 1956.**

APPENDIX G

LIST OF REFERENCES

1. FLEET MARINE FORCE MANUALS

FMFM 1-3, Basic Rifle Marksmanship
FMFM 1-3A, Field Firing Techniques
FMFM 6-4, Marine Rifle Company/Platoon
FMFM 6-5, Marine Rifle Squad
FMFM 7-1, Fire Support Coordination
FMFM 7-4, Field Artillery Support

2. U.S. ARMY MANUALS

FM 6-20, Fire Support in Combined Arms Operations
FM 6-40, Field Artillery Cannon Gunnery
FM 6-40-5, Modern Battlefield Cannon Gunnery
FM 21-26, Map Reading
FM 21-75, Combat Training of the Individual Soldier and Patrolling
FM 23-85, 60MM Mortar, M19
FM 23-91, Mortar Gunnery
FM 30-5, Combat Intelligence
TM 5-249, Terrain Models and Relief Map Making

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